

# Exploring the Business Potential and Value Propositions of Arctic Berry Wax

LUONNONTUOTEALAN TUTKIMUSSEMINAARI

Laadukkailla tuotteilla uusia avauksia:

Laatua ja lisäarvoa luonnontuotteille

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# Natural WAX of Arctic Berries as Our Treasure

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- The aim of the multidisciplinary WAX Interreg Nord research project is to develop environmentally sustainable methods for extracting wild berry wax from industrial side streams and waste
- New application areas and uses for wild berry waxes will be explored by perusing the entire value chain from berry picking to products thus aiming to create new high-end and high value wild berry wax-based products
- The Arctic berry waxes of bilberry and lingonberry have been analyzed and their chemical and physical characteristics have been compared with other available waxes. Arctic berry wax-based products have been analyzed from business and marketing points of views with the aim of exploring new niche applications and products
- Co-ordinated by University of Oulu, Centre of Material Analysis, Faculty of Natural Science, Department of Ecology and Genetics, Plant Biology and Biotechnology Group and partnered by Luleå University of Technology, NIBIO – Norwegian Institute of Bioeconomy Research and Oulu University of Applied Sciences
- Funded by Interreg Nord, Regional Council of Lapland, Norrbotten County Administrative Board and Troms County.

# Introduction

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- The aim of the study is to increase the understanding of exploring the business potential of Arctic Berry Wax and developing product ideas and value propositions based on the multidisciplinary WAX project during 2016-2019.

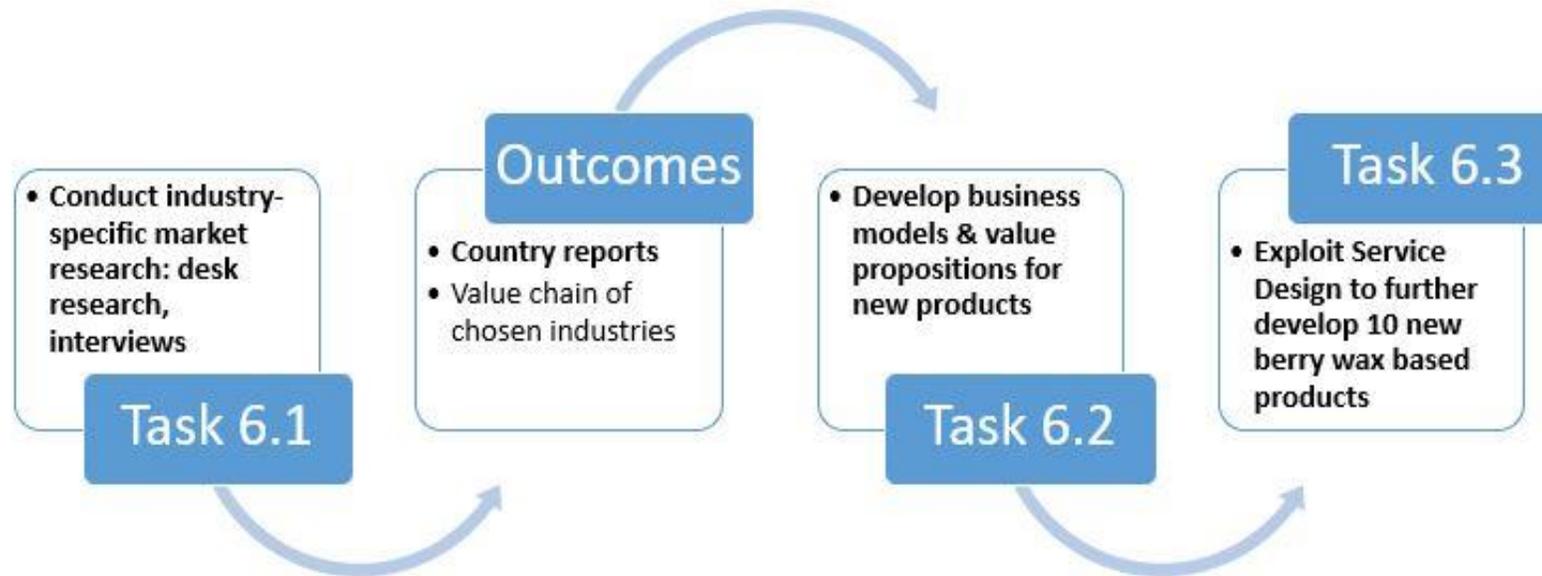
The following research questions will be answered:

1. What kind of business potential for SMEs can cuticular wild berry wax offer in the domain of natural products, e.g. cosmetics?
2. How can this business potential be developed into value propositions for customers?

Cuticular wax is the outer covering layer on berries. In cosmetics, waxes are used e.g. to thicken formulations because they have emollient and protective qualities; additionally, they improve the viscosity and consistency of cosmetic products (Endlein and Beleikis, 2011)

# Research Agenda for Developing Business Potential of Arctic Berry Wax

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# Theoretical Background

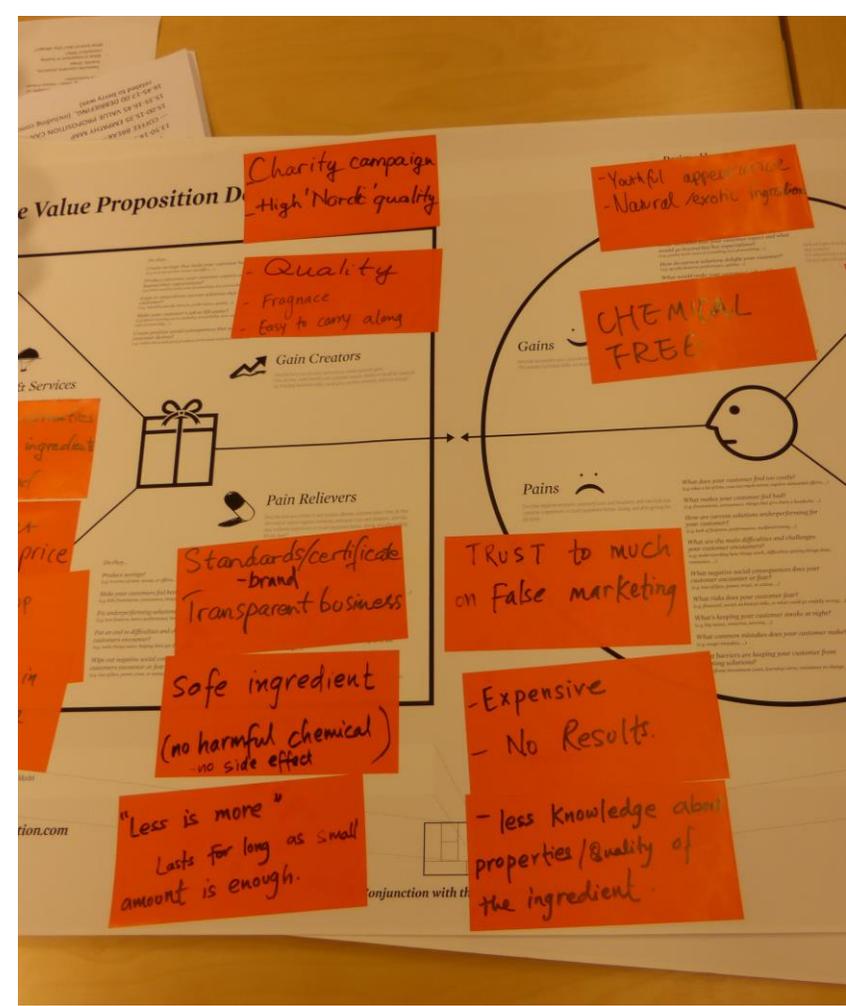
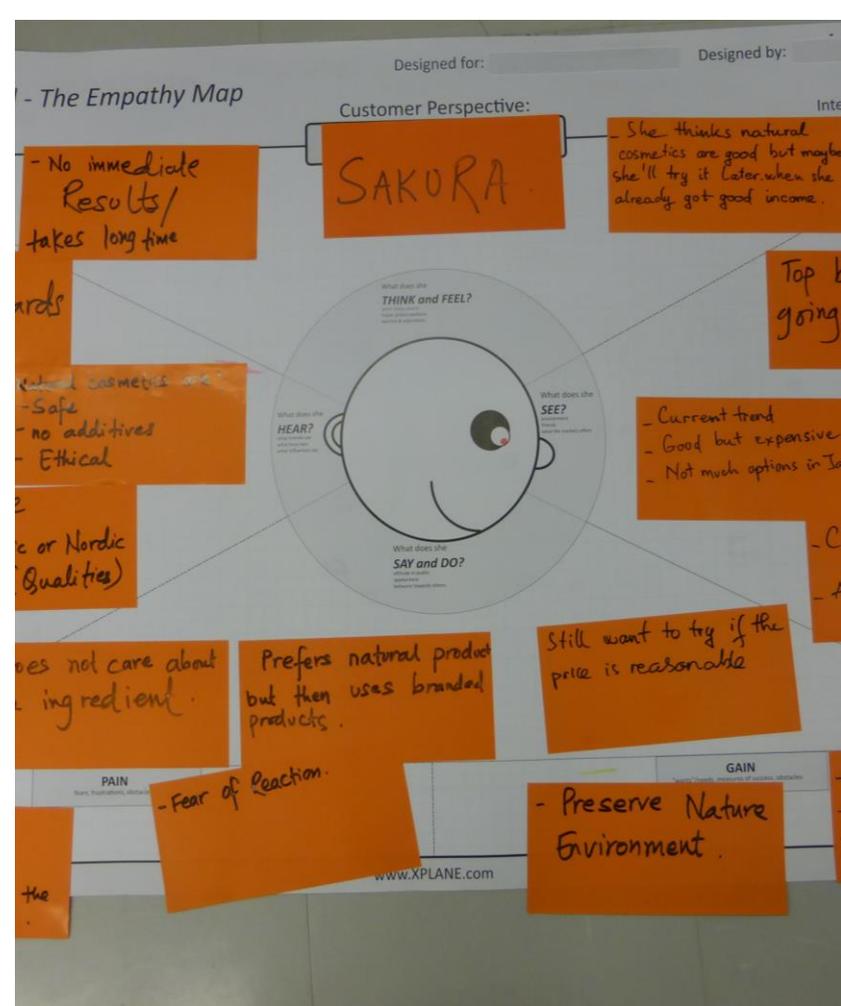
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- *Green consumer behaviour* - prefer to avoid products that can be considered unhealthy to themselves or others, wish to reduce their environmental footprint by sustainable consumption (Elkington, 1994)
- *Value proposition* - encapsulates a strategic management decision on what a company believes its customers value the most and, hence, what it attempts to deliver in order to gain a competitive advantage (Payne and Frow, 2014)
- *Business opportunities* from shapeless ideas about latent market needs or about under-utilized resources. For a business opportunity to carry value and business potential, mutual understanding is needed among the partners in the endeavor.
- Thus, a market opportunity always involves collaboration between entrepreneurs, professionals, customers and other involved parties (Mainela, Puhakka, & Wakee, 2016)

# Methodology

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- Research approach: case study strategy
- Data gathering; methods of observation, desktop research, document analysis, interviews, cosmetics proto testing, market analyses and service design workshops
- Data analysis: qualitative methods
- Service design workshops were facilitated with visual tools to gain understanding of the needs of relevant customers as well as the activities of the service providers (Osterwalder and Pigneur, 2010 and Osterwalder, Pigneur, Bernarda and Smith, 2014)



Process of Developing a Value Proposition in the Service Design Workshop

# Results

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- Market research was conducted
- New product ideas were developed
- Value propositions for marketing to green consumers representing various customer segments were developed

# Global Outlook of Natural and Organic Cosmetics

	GLOBAL	EUROPE	ASIA Pacific	North America
MARKET SIZE 2016 IN REVENUE	USD 9.6 bn	USD 4.1 bn	USD 0.5 bn	USD 4.9 bn
TOTAL MARKET SIZE OF COSMETICS		4.5%	< 1%	7%
MARKET GROWTH	5-6%		Largest market: Australia	
EXPENDITURE PER CAPITA / 2016		USD 7.6		USD 14
CERTIFIED PRODUCTS		60%		11%
MAJOR CHANNELS		Specialist Retailers	Department Stores, Beauty Retailers	Natural Food Shops

# Examples of Value Propositions and New Business Ideas

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*'Ghost Gel'* Hunting Cream

*Dual Function* Coupling Agent

Edible Coatings

Multi-Functional Coatings (Smart Coatings)

*Arctic Pill Power*: Food supplement (Vitamins etc.)

*Berry Happy Birthday*: Edible candles

*Arctic Tingle*: Taste Carrier (Intensifier) in Gourmet Cooking

Outdoor cream and soap made with Arctic berry wax

# Customer Segments of Cosmetics Workshop

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## Customer segment:

1. Asian Female: Sakura



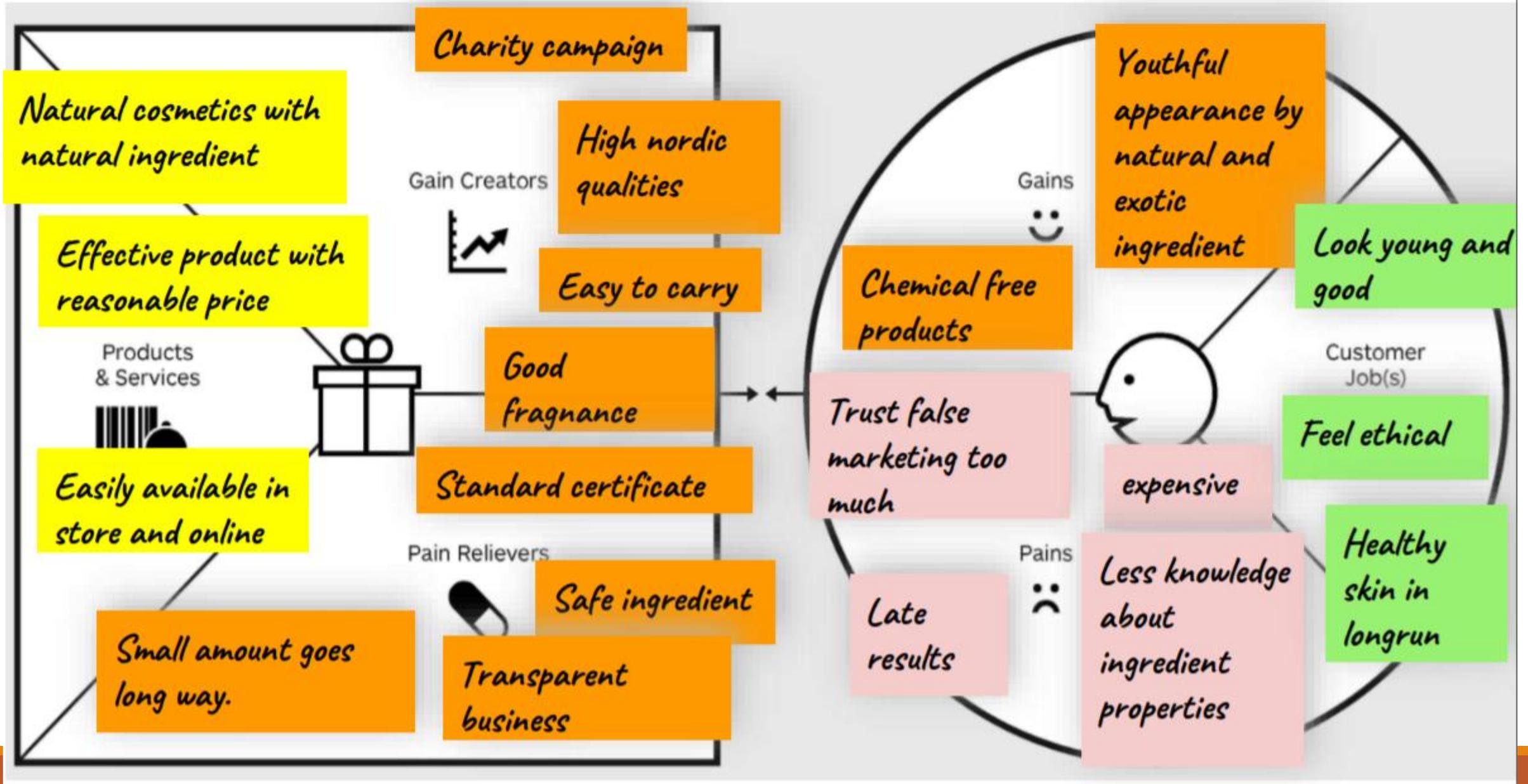
2. North European male: Björn



3. Middle aged female: Erja



# 1. Sakura's VPC



# Conclusions

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- There clearly seems to be business potential based on arctic berry wax and berry powder especially in the field of natural cosmetics (niche products)
- Arctic berry wax as a new berry-based raw material opens up the opportunity for the SMEs to launch new niche products domestically and internationally
- It was found out that certain specific qualities of arctic berry wax may raise interest within cosmetic manufacturers: vegan, sustainable & renewable, natural, healthy, preserves well, contains antimicrobial and antioxidant properties, thermally stable, offers UV protection
- Challenges: price, material availability, extraction method, safety testing and certification systems

# Further Research

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- Further research:
  - 1) issues related to circular economy in business models of natural cosmetics and
  - 2) business potential of arctic berry wax in different industries (e.g. food and materials science)
- In future research, comprehensive interdisciplinary collaboration together with acknowledging the entire value chain is essential
- The know-how of experts in biomedicine, plant biology, micro- and nanotechnology and material science working collaboratively in business innovation preparation activities is vitally important.



Photo: Ilkka Jaakola

Thank you!  
Questions and comments, please!

# Key References

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Endlein, E. & Beleikis, K. (2011, April). Natural Waxes –Properties, Compositions and Applications. *Sofw Journal*. English edition, 2-8.

Mainela, T., Puhakka & Wakkee, I. (2016). International Opportunities and Value Creation in International Entrepreneurship. In S. Marinova, J. Larimo & N. Nummela (Eds.), *Value Creation in International Business*. Volume 2: An SME Perspective. Palgrave Macmillan.

Narula, S. A., Desore, A. (2016). Framing green consumer behaviour research: opportunities and challenges. *Social Responsibility Journal*, 12(1), 1-22.

Osterwalder, A., Pigneur, Y., Bernarda, G. & Smith, A. (2014). *Value Proposition Design*. New Jersey, USA: Wiley & Sons.

Ristioja, A. (2016). Natural Product Industry. Sector Report. Centre for Economic Development, Transport and the Environment of Lapland. The Ministry of Economic Affairs and Employment.